



# **Capacity Remuneration Mechanism (CRM)**

## **Intermediate Length Contracts**

### **Decision Paper**

**SEM-24-035**

**02 May 2024**

## Executive Summary

The SEM Committee consulted on proposals to introduce Intermediate Length Contracts (ILCs) of three to five years late last year (SEM-23-093). A number of questions were posed, including around the maximum duration for ILCs, the appropriate investment threshold, approaches to prevent gaming and decarbonisation.

Ten responses were received, with most respondents supporting the introduction of ILCs. Various viewpoints were expressed regarding the appropriate maximum duration of an ILC, the investment threshold and the materiality of gaming concerns. Likewise, there was no consensus from respondents on questions around the long-stop date, termination payments and performance security. The majority of respondents agreed that Existing Capacity seeking an ILC should be required to submit Implementation Plans but considered some milestones used for New Capacity to be inappropriate. Other issues raised included the treatment of ILCs in solving constraints, USPCs and the Exception Application process.

Several respondents commented on decarbonisation and how the CRM could evolve to better incentivise low-carbon technologies. Some saw value in enabling older plants to invest in efficiency and others requested an additional discrete consultation on decarbonisation in the context of the CRM.

After careful consideration of the extensive feedback provided, the SEM Committee has decided to introduce ILCs for the 2028/29 T-4 auction in November 2024 and to all future auctions until further notice. The key decisions around the design of the ILC are outlined in full in Section 5 of this paper. Among the decisions made are that a market participant may apply to the RAs to obtain an ILC of up to five years, where they can demonstrate:

- That the unit will be investing more than €100,000/MW<sub>d</sub> (the Intermediate Contract Investment Rate Threshold (ICIRT)).
- That post-investment, the unit will emit no more than 550gCO<sub>2</sub>/kWh. If a unit is subject to run-hour limits, investment made under an ILC contract should aim to remove the emission restriction on run hours or, at the least, not exacerbate the restriction.

The capacity with an ILC will also be tested against relevant Best Available Techniques (BAT) standards.

The Capacity Market Unit (CMU) with an ILC will be required to submit an Implementation Plan – but the SEM Committee will consider exemptions to certain milestones if appropriate – and will be subject to the ECPC/a USPC. Bidding will be mandatory for an existing CMU approved for an ILC offer. In addition, the decision outlines that a multi-year ILC offer will be treated the same as a multi-year New Capacity offer for the purpose of solving constraints. All other design decisions are included in Section 5.

Regarding decarbonisation, the SEM Committee considers that as well as the requirement outlined above, the introduction of ILCs to refurbish existing units may reduce the need to lock-in New Capacity with an economic life extending further into the future, at which time additional zero and low-carbon technologies are anticipated to be available. The SEM Committee will keep the issue of utilising ILCs to further incentivise decarbonisation under consideration and will review developments in other markets.

The SEM Committee would like to emphasise that investors seeking to bid for an ILC in the 2028/29 T-4 auction must submit an ILC Exception Application by 4 June 2024. An ILC Exception Application template and guidance note will be published on the SEM Committee website in parallel with this paper.

While changes to the Capacity Market Code will not be in place by the time Qualification and Exception Applications are due on 4 June, the SEM Committee intends to bring forward a CMC modification proposal to implement the ILC decisions outlined in Section 5 of this paper as soon as possible.

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# 1. Background

## 1.1 Introduction

Under the current CRM rules, New Capacity investing more than the New Capacity Investment Rate Threshold (NCIRT) can apply to the RAs to obtain a New Capacity Exception and bid for a Reliability Option contract of up to 10 years. The NCIRT is currently set at €300,000/derated MW ( $MW_d$ ). New Capacity investing less than €300,000/ $MW_d$  and Existing Capacity can only bid for a one-year contract. Existing Capacity cannot bid for more than a one-year contract, although where an existing Capacity Market Unit (CMU) invests to increase the capacity of the CMU, the incremental capacity can receive a contract of up to 10 years, where the investment in incremental capacity exceeds the NCIRT.

In November 2023, the SEM Committee consulted on proposals to introduce Intermediate Length Contracts (ILCs) of three to five years for Existing and New Capacity seeking to make intermediate levels of investment in time for the next T-4 auction to be held in 2024 (SEM-23-093<sup>1</sup>). This approach was envisaged to de-risk investment in refurbishment for Existing Capacity, by allowing them to recover the investment cost over a multi-year contract. It had been argued by some market participants that the introduction of an ILC would better facilitate investment in capacity, at a time when the SEM is short of capacity, experiencing increased forced outage rates/decreased reliability and is paying prices significantly in excess of the Best New Entrant cost for New Capacity. Promoting investment in existing units should help improve efficiency and availability, decreasing the volumes of New Capacity needed, which would be beneficial to consumers and may have positive environmental benefits. Extending the life of existing CCGTs, for example, may help avoid locking-in new fossil fuel capacity with an economic life stretching into the late 2030s, and possibly beyond.

This approach of allowing ILCs for intermediate levels of investment was similar to that employed in other European CRMs, such as in GB, Belgium and Poland.

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<sup>1</sup> [Refurbishment Consultation Paper.pdf \(semcommittee.com\)](#)

The SEM Committee, therefore, in SEM-23-093, consulted specifically on whether to introduce the new ILC, and if so:

- What the maximum duration for the ILC should be;
- What the appropriate investment threshold, i.e., the ICIRT to be eligible for an ILC, should be;
- What approaches to prevent gaming of the new arrangements could be taken;
- What approaches to promote investment in low carbon technologies could be taken; and
- What other CRM reforms could further promote investment in low carbon technologies and be included in the reforms consulted on in the document.

The sections that follow offer an overview of the consultation proposals, a summary of the responses received to the consultation, the SEM Committee's responses to the points raised by respondents, and what the SEM Committee's decision is.

## 2. Summary of Consultation Proposals

### 2.1 Design Overview

In SEM-23-093, the SEM Committee proposed introducing the option of ILCs for Existing Capacity or New Capacity investing more than the Intermediate Contract Investment Rate Threshold (ICIRT) and less than the current NCIRT. While acknowledging that the proposed change may primarily benefit Existing Capacity, the SEM Committee considered whether ILCs could also be available to New Capacity looking to invest more than the ICIRT, but less than the NCIRT. Permitting New Capacity to also bid for ILCs, where investing more than the ICIRT, would facilitate more equal competition between Existing Capacity and New Capacity.

The SEM Committee consulted specifically on:

- whether to introduce an ILC for Existing Capacity and New Capacity, of three years or five years or some other length; and
- what rate of investment Existing Capacity and New Capacity should have to invest per MW<sub>d</sub> to obtain an ILC.

## **2.2 Measures to promote emissions objectives**

The SEM Committee also sought the views of stakeholders on the potential design of measures within the CRM to promote investment in low carbon technologies on the island of Ireland, noting the changes being consulted on in GB<sup>2</sup>. Where such measures may feasibly be implemented in time for the 2028/29 T-4 auction, the SEM Committee stated it would give due consideration to implementing them on this tight timeline, but also recognised that it may be necessary to implement the reforms in stages.

## **2.3 Gaming Issues and mitigation**

The SEM Committee also considered whether additional scrutiny/monitoring measures would be appropriate for refurbishing plants to prevent gaming of any new arrangements and that there may be a case for more stringent monitoring of actual spend versus ex ante estimates than for New Capacity. In the case of New Capacity, it is more difficult to build without investing at least €300,000/MW<sub>d</sub>. In the case of a refurbishing plant, it may also be difficult for the RAs to ascertain whether a unit really needs to invest a certain amount per MW<sub>d</sub> to continue to be economically viable.

## **2.4 Changes to Exception Application processes**

The implementation of a new ILC would require changes to the Exception Application processes.

The SEM Committee proposed that Existing Capacity would be eligible to apply to the RAs to obtain an ILC and will be required to demonstrate that its investment exceeds the ICIRT, and then obtain a form of USPC for a multi-year contract.

For New Capacity seeking to invest more than the ICIRT, but less than the NCIRT, it was proposed that the New Capacity would also be able to apply to the RAs via an extended New Capacity Exception Application process to have the right to bid for an ILC. If approved by the RAs, the New Capacity would be able to bid for an ILC at any price up to APC, like any other New Capacity unit<sup>3</sup>. Where any New Capacity unit applies to the RAs for the right to bid for a 10-year contract, and the SEM Committee

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<sup>2</sup> See Section 4.1 of [SEM-23-093](#).

<sup>3</sup> Including New Capacity which is only eligible to bid for a 1-year contract. Under existing arrangements all New Capacity can bid at any price up to the Auction Price Cap (APC).



judges it will spend more than the ICIRT, but less than the NCIRT, it was also proposed that that capacity will be allowed to bid for an ILC.

## **2.5 Implementation Plan, Long-Stop Date, Termination Payments, and Security Cover**

As part of the proposal to introduce ILCs, the SEM Committee also considered whether Existing Capacity seeking a multi-year contract should be required to submit an Implementation Plan as part of the Qualification process, in the same way as New Capacity is currently required to submit an Implementation Plan to the TSOs during the Qualification process.

In SEM-23-093, the SEM Committee sought feedback on whether this is appropriate and whether it is appropriate to require the same milestones to be included in an Implementation Plan for capacity seeking an ILC, noting that the GB Capacity Market Rules require refurbishing capacity to submit a construction plan, similar to New Capacity.

In addition to having a requirement for an Implementation Plan, the SEM Committee also considered whether the Long-Stop Date for the ILC should be the same as for a multi-year New Capacity contract, the same as for single-year Existing Capacity, or an intermediate length, and welcomed views in this regard.

The SEM Committee also envisaged that Existing Capacity seeking a multi-year contract would not be required to pay termination charges or lodge performance securities, the same as Existing Capacity currently. The SEM Committee, however, noted that it may keep the issue under review, particularly if market participants fail to deliver the investment as envisaged.

## **3. Summary of Consultation Responses**

### **3.1 Responses**

The SEM Committee received a total of ten responses to the consultation SEM-23-093, of which one was a letter of support for another response. One response was marked as confidential. The non-confidential responses were from:

- Bord Gáis Energy

- Electricity Association of Ireland
- Energia
- EP UK Investments
- ESB Generation and Trading
- Hydrogen Ireland
- Moyle Interconnector Ltd.
- Mutual Energy
- SSE

### **3.2 Overview**

Most respondents supported the introduction of ILCs, noting that the proposed introduction of such contracts has a role to play in Security of Supply and decarbonisation. Some concern was also raised in regard to the proposal and what it could mean for competition between Existing and New Capacity. Bord Gáis Energy (BGE), for instance, stated that the introduction of ILCs is only part of an appropriate solution in the transition to decarbonisation and as a solution on its own, it could undermine the scope for a level competitive playing field between new assets and existing efficient assets, that could fully refurbish in the future, to run on low to net-zero fuel, and create asymmetry in the market by providing revenue to units close to their end of life but needed for Security of Supply in the short term.

Other general comments that respondents considered necessary to address are summarised in section 3.8 Other Issues. Regarding the specific questions asked in the consultation, the responses are summarised below.

### **3.3 Maximum Duration of Contract**

In SEM-23-093, the SEM Committee asked the question:

- What is the appropriate maximum duration for the intermediate length contract?

Some respondents argued that the maximum duration of the ILC should be between seven to nine years. SSE stated seven to nine years would be a more realistic timeframe for ILCs, considering that return on investment could still be significant for repowering a site, for instance if it required a gas connection or where conversion to hydrogen

necessitated additional investment. Energia argued that a contract length of seven years for ILCs would lead to greater competition in the CRM, lower bid prices for consumers and would enable more refurbishment proposals to come forward to the ultimate benefit of consumers. EP UK Investments (EPUKI) stated the maximum duration should be set at any period up to 10 years, and that ILCs should be available based on the investment required and necessity of capacity undergoing refurbishment.

BGE, on the other hand, argued that the market and systems need to be phasing out carbon intensive generation and ILC contracts should not extend beyond the end of 2031. BGE thus suggested an ILC length of three years, from 2028/2029. In addition, given the stringent decarbonisation targets for 2030, BGE stated that ILCs are only needed for as long as decarbonised capacity is being developed and delivered in parallel, which BGE expects should be delivered in the early 2030s. BGE also stated that three-year contracts would allow newer, efficient generation to undergo low carbon refurbishment.

ESB Generation and Trading (ESB GT) stated that ILCs should allow participants to recover the costs over a period that allows for broad and competitive participation in the capacity auction process, and a contract duration of at least five years would facilitate this. Moyle Interconnector Ltd. stated that the maximum duration should not exceed the length of contract awarded for new build projects but set at a level, in conjunction with ICIRT, that permits refurbishing units to be competitive with new build plants in the auction.

### **3.4 Level of ICIRT**

In SEM-23-093, the SEM Committee asked the question:

- What is the appropriate Intermediate Contract Investment Rate Threshold (ICIRT) in €/MW<sub>d</sub> for units to be eligible for the intermediate length contract?

There was no clear consensus among the respondents for what the appropriate Intermediate Contract Investment Rate Threshold (ICIRT) in €/MW<sub>d</sub> should be. Moyle Interconnector Ltd. suggested that it should be set at a level which allows refurbished units to be competitive with those eligible for 10-year contracts, while EPUKI stated that the ICIRT should be flexible and depend on the length of contract being sought. EPUKI

further stated that increments used to determine the threshold should be based at an appropriate level so as not to act as a barrier to necessary refurbishments of Existing Capacity.

ESB GT cautioned against setting the ICIRT too high and stated that it should be set sufficiently low as to allow participants to choose the appropriate contract length for their investment. This approach, according to ESB GT, would minimise any future calls for the introduction of more tailored contracts with specific lengths and investment rate thresholds. If the level is set too high, Energia also stated that this could prevent genuinely beneficial investments in refurbishment from taking place. In Energia's view, the ICIRT should be set at approximately €70,000/MW<sub>d</sub>.

SSE suggested that an ICIRT level that is set too low could produce frequent repeat applications for ILCs. According to SSE, if the ICIRT were set too low, it would be unlikely that ILCs would be used to finance anything but the smallest remedial upgrades to a site and more likely to result in the extension of the life of a unit without actual decarbonisation, which then presents the risk of stranded assets that are unabated. SSE suggested that an ICIRT of €160,000/MW<sub>d</sub> to €200,000/MW<sub>d</sub> would be reasonable.

BGE had no strong view on the threshold and stated that if a unit needed a USPC, it should be allowed to apply regardless of investment level.

### **3.5 Gaming and Monitoring Spend**

In SEM-23-093, the SEM Committee asked the question:

- Is gaming a material concern? What approaches should be taken to prevent gaming of the new arrangements?

There was a range of views on the materiality of gaming concerns. BGE, for example, stated that market participants with a large portfolio have a vested interest in overstating the cost of refurbishment in order to get a high USPC, on the basis that this would set the auction clearing price at a higher level for all their respective units. ESB GT stated that a qualification regime that allows the maximum participation of units will result in the most efficient delivery of capacity, ensuring that projects will only bid realistic costs to ensure competitiveness.

SSE stated that the frequency of gaming is directly correlated with the ICIRT chosen, while Energia also stated that setting a mandatory ICIRT, that must be reached to qualify for an ILC, would be more likely to encourage gaming. If a participant's proposed spend is short of the threshold, Energia suggested that an incentive would be to unnecessarily increase spend to qualify for an ILC, which would ultimately lead to poor value for consumers. To mitigate some of the gaming concerns, Energia suggested placing less emphasis on the ICIRT and more focus on the benefits of the proposed refurbishment to consumers. Energia further stated that the RAs can utilise independent assurance or director's certificates to gain comfort around gaming concerns.

EPUKI did not consider gaming to be a material concern, when considering the historic performance of the CRM. It stated that capacity contracts by design protect against gaming, and any gaming or any unintended consequences are limited as the ILC proposes to only change the duration of the contract and there is no change intended to the obligations associated with Awarded Capacity or the payment of the same. EPUKI suggested that the only possible advantage of gaming would be for a participant to underinvest on the ICIRT but given they will be undertaking the same commitment for the same duration, there is limited benefit in doing so. It stated that this is particularly true in older plants where refurbishment or major works may be necessary to improve reliability and availability. Failing to make sufficient investment to support this refurbishment would be counterproductive, in EPUKI's view, as a participant would then be less likely to be able to fulfil their obligations under a capacity contract.

### **3.6 Long-Stop Date, Termination Payments, and Performance Security**

In SEM-23-093, the SEM Committee asked the questions:

- What is the appropriate length of the Long-Stop Date for Existing Capacity seeking an intermediate length contract?
- Should Existing Capacity with an intermediate length contract be subject to termination payments and performance security requirements?

There was a range of different views on the length of the Long-Stop Date (LSD), termination payments and the posting of performance securities.

## Long-Stop Date

Energia suggested that the LSD will depend on the length of the ILC and stated that SEM-23-046<sup>4</sup>, which gives more flexibility in the setting of a Long-Stop date for Awarded New Capacity, could be amended to include all capacity awarded ILCs, if necessary. BGE stated that the length of the LSD would depend on the scale of the outage. In its view, rather than allowing units to go on long term outages to refurbish to run on low carbon fuel, it would be more prudent to allow the oldest, least reliable units to undergo minimalist refurbishments to extend their lifespan and increase reliability. The older units could then provide cover for the longer-term outages that would be needed to allow newer more efficient plants to decarbonise and to help bridge the gap while new plants build and come online. BGE suggested that 18 months is too long for the LSD and that the time period should be at the shorter end of the range of 6 to 12 months.

ESB GT stated that the LSD of 18 months for multi-year New Capacity contracts should be applied to refurbishing plants as well. ESB GT also suggested that equitable provisions should be made for all projects with ILCs to be able to avail of the reliefs afforded to New Capacity in the case of project delays<sup>5</sup>, which was a view shared by Energia.

EPUKI were opposed to any change in policy regarding the LSD in the CRM. It stated that there is no rationale or reason to introduce an LSD for Existing Capacity which is planning refurbishment as this capacity is already available. Introducing this, according to EPUKI, would act as barrier and disincentive for Existing Capacity.

## Termination Payments and Performance Security

There were mixed responses from respondents on whether it would be appropriate for Existing Capacity seeking an ILC to be subject to termination payments and performance security. Moyle Interconnector Ltd. and ESB GT both maintained that termination payments and performance security should be required for capacity with an ILC, similar or equivalent to those required for New Capacity. BGE also suggested that capacity seeking an ILC should be treated the same as New Capacity in this regard and

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<sup>4</sup> [SEM-23-046 - Capacity Market Code Modifications Workshop 29 – Decision Paper for CMC\\_03\\_23](#)

<sup>5</sup> [SEM-23-101](#) and [SEM-23-108](#).

stated that consideration would be needed to ensure the level of payments/security requirements strike a balance between the refurbishing unit's return to market and the extent of investment being undertaken to remain economically viable for a limited period of time at optimum cost to the consumer.

SSE stated that any penalties and payments should be proportionate to the contract length and take account of the fact that Existing Capacity carries market risk, where a New Capacity site would not yet face market risk until energisation. Penalties and payments, according to SSE, should also be proportionate to the degree of effort and the fact that, in principle, repowering of an existing site should have relatively less complexity regarding planning or connection policy than New Capacity. Excessive penalties would also be disproportionate, in SSE's view.

EPUKI, on the other hand, was opposed to what it described as "changes to the existing policy" on termination charges and performance securities. Existing Capacity is not required to pay these and EPUKI saw no reason why this should change, should Existing Capacity seek a multi-year contract. Energia shared a similar view and stated that termination payments and performance securities should not be required. In Energia's view, the risk involved in the non-delivery of Existing Capacity with an ILC is different to those for New Capacity and in particular, the delivery risk of capacity is far lower than delivery risk of New Capacity.

### **3.7 Implementation Plans**

In SEM-23-093, the SEM Committee asked the question:

- Should Existing Capacity seeking a multi-year contract be required to submit Implementation Plans for consideration by the TSOs as part of the Qualification process, and are the same milestones employed for New Capacity appropriate?

The majority of respondents agreed that Existing Capacity seeking an ILC should be required to submit Implementation Plans but considered some milestones used for New Capacity to be inappropriate.

SSE and Moyle Interconnector Ltd. considered the proposal for Existing Capacity seeking an ILC to submit Implementation Plans to be reasonable. Moyle Interconnector

Ltd. stated that while it is reasonable, whether the milestones for New Capacity would be appropriate would depend on the specifics of the project. It recommended flexibility in terms of the application of requirements for Implementation Plans and suggested that it may need to be tailored on a case-by-case basis. SSE stated that a proportionate approach would be needed, reflective of the fact that if a site is repowering, there will be other complexities that may be an obstacle to the meeting of milestones.

Energia considered it appropriate for plants in receipt of an ILC to submit Implementation Plans. In Energia's view, submitting the Implementation Plan in advance, as part of the qualification process, should help ensure that the RAs can filter out speculative applications that may prevent realisable and beneficial applications for refurbishment from succeeding in an auction. Energia suggested that the same milestones should apply to the extent that they are appropriate.

BGE shared this view and suggested that capacity seeking an ILC should be treated the same as New Capacity, and that failure to do so would undermine A.1.2.1 (f) of the CMC. It anticipated that the time period, however, for which the refurbishment needs to occur should be limited to the extent necessary to enable these units to improve their carbon efficiency and maintain reasonable economic viability for a limited time period.

ESB GT stated that appropriately detailed Implementation Plans should form part of the qualification documentation for ILCs, with appropriate assessment by the TSOs and RAs. Given the potential for significant variation in scope and nature of refurbishment projects, ESB GT stated that consideration should be given by the TSO as to the milestones and requirements that are appropriate for the Implementation Plan for different projects.

EPUKI was opposed to capacity seeking an ILC having to submit Implementation Plans. It stated that it is not appropriate nor necessary to introduce the Implementation Plan reporting requirement for ILCs at this time. According to EPUKI, Existing Capacity undergoing refurbishment would still be providing capacity to the grid. EPUKI supported the simplification of the process of applying for ILCs to retain Existing Capacity for Security of Supply and considered it necessary to reduce the reliance on Temporary Emergency Generation (TEG). The application process should be via the existing Exception Application process, in EPUKI's view.



## **3.8 Other Issues**

### **Treatment of ILCs in Solving Constraints**

A point raised by Energia in its response to SEM-23-093 was that capacity bidding with ILCs should be given priority over New Capacity bidding in with longer duration contracts, where that capacity is needed to be constrained on to meet Locational Capacity Constraint (LCC) requirements. Energia recommended amending Section F.8.4.4 of the CMC such that capacity bids with a shorter duration are always constrained on ahead of bids with a longer duration. The current wording of F.8.4.4 would only prioritise one-year contracts and would not distinguish between ILCs and 10-year New Capacity contracts.

Energia stated that the modification to introduce ILCs prior to the 2028/29 T-4 auction should update the CMC to reflect this in the auction clearing rules, as laid out in F.8.4.4. Failure to do so risks damaging investor confidence and failing to facilitate the efficient and beneficial refurbishment of Existing Capacity, in Energia's view.

### **USPCs and Exception Application Process**

In SEM-23-093, the SEM Committee asked the question:

- What is your view on the proposed changes to the Existing Capacity Exception Application process and New Capacity Exception Application process?

There were some general comments regarding a review of the USPC process and comments on the need for greater transparency for the USPC process.

Energia considered the proposed changes to the Existing Capacity Exception Application process and New Capacity Exception Application process to be reasonable but stated that it remained of the view that the USPC application process should allow Existing Capacity the "ability to opt-out of the auction if they do not receive an adequate USPC determination".

BGE stated that if an ILC is rejected, it would be logical for that generator to still be considered for a one-year USPC contract if the NGFC outlined in the Exceptions Application would take its cost above the ECPC. BGE also stated that the consultation does not address issues in the Exceptions Application process for USPCs and the

necessity for USPCs, not only for units near the end of their life, but for units that are currently already efficient. In BGE's view, introducing ILCs will not remove the necessity to fix the USPC process and it urged the RAs to consult with market participants on this issue. BGE considered granting pay-as-bid USPCs that do not impact T-4 auction prices to all CCGTs that apply to be crucial in ensuring security of supply at optimum cost to the end consumer. ESB GT expressed similar concern on the capability of the current process to be extended to ILCs and stated that it is appropriate for the RAs to undergo a comprehensive review of the Exception Application process.

Moyle Interconnector Ltd. and SSE considered the changes to be reasonable, but SSE noted that it would be important to see the proposed legal drafting to ensure that there are no unintended consequences.

### **Decarbonisation**

In SEM-23-093, the SEM Committee asked the question:

- How could the design of intermediate length contracts promote investment in low carbon technologies?

There was widespread support for the consideration of decarbonisation issues, but many respondents viewed that CRM measures alone were unlikely to create a full solution. There were also limited responses in terms of concrete proposals to promote investment in low carbon technologies, with some suggestions from respondents that the SEM Committee should consult further on decarbonisation this year.

SSE considered the term "low carbon technology" to be broad and assumed the consultation referred to the entry to the CRM of hydrogen, CCS, biofuel, biomass and CHP units. SSE suggested that the value of ILCs is in encouraging the repowering of existing sites along a decarbonisation pathway. It stated that an important factor to consider in this regard would be that connection policy, network policy and Grid Code all need to have provisions to provide clarity as to how a repowering/refurbishment site should be treated.

Energia supported the intention to promote investment in low carbon technologies but stated that such proposals should be detailed and form part of a separate consultation process. Energia stated that it would not support the introduction of such initiatives as

part of the consultation to introduce ILCs ahead of the 2028/29 T-4. Energia considered it to be a mistake for the RAs to add significant proposals on carbon reduction via the consultation SEM-23-093, and argued they could lead to unintended consequences.

EPUKI stated that the most direct impact of the ILC on low carbon technologies would be through facilitating the refurbishment of older conventional plants to operate more efficiently. It suggested that ILCs should be available only to units which satisfy Part (a) of Article 22 (4) of the Clean Energy Package, which requires that an electricity generation unit emits no greater than 550g of CO<sub>2</sub> per kWh electricity generated. The indirect benefit of the ILC is the retention of Existing Capacity to mitigate against a further reliance on TEG, in EPUKI's view.

BGE stated that in isolation, ILCs cannot promote investment in low carbon technologies. It suggested that any investment made in technology this decade must improve the carbon efficiency of the unit. BGE also stated that while ILCs will not have a direct impact, their role in prolonging the life of older plants for a limited time period would play an instrumental part in the overall decarbonisation process.

ESB GT stated that there is no scheme in the current Capacity Market to incentivise investment in either new low CO<sub>2</sub> dispatchable generation or transitioning existing fossil fuelled generation to low-carbon fuel. ESB GT suggested that there is also a need for financial incentives to invest in hydrogen readiness and ILCs may present the opportunity for existing plants to transition to low carbon fuels through appropriate reinforcements. ESB GT also stated more information and clarification as to how any required demonstration of intent to decarbonise in the future is to be assessed, verified, and enforced in the Exception Application process would be needed.

Both Hydrogen Ireland and the Electricity Association of Ireland encouraged the SEM Committee to further explore ways to bring more zero carbon dispatchable generation through the CRM, through new build and supporting the decarbonisation of existing plants.

### **Other Comments**

More generally, there were comments from respondents on contract length, the enduring design of the Capacity Market, the applicability of allowing ILCs for New

Capacity, support mechanisms needed for the transition from natural gas to low carbon hydrogen and request for greater transparency ahead of the 2028/29 T-4 auction.

In relation to decarbonisation, SSE stated that decarbonisation technology is expensive, with long lead times and carries investment risk of a degree that ILCs will not cover. It stated that it would be important to consider 15-year contract lengths for wholesale decarbonisation projects under the CRM. It argued that the Best New Entrant is currently an unabated OCGT, which has set price caps that make it unlikely that full decarbonisation projects would be fully remunerated within a 10-year timeframe.

BGE identified a three-fold problem of maintaining Security of Supply during the decarbonisation transition in the SEM, which in its view, is not addressed in the consultation. BGE also proposed solutions to these problems, which are summarised below:

The first problem BGE identified was that existing already efficient generators that are needed for Security of Supply until at least 2030, cannot maintain financial viability under the current ECPC. To counter this concern, BGE suggested that currently efficient existing units that are not already near their end-of-life should be granted an RA-approved USPC as a rule. The second problem BGE identified was that many other existing generators that are close to end-of-life already are also needed to maintain Security of Supply this decade, but it is not appropriate to rely on investments in these units to be “net zero” ready by 2028 under an ILC approach. BGE suggested that a solution to this problem was that ILCs should be provided for qualifying units for three years using the USPC process, in a way that it does not impact auction clearing prices. The third problem in BGE’s view is that a signal for decarbonised dispatchable units needs to be developed and incorporated into an enduring market design and it stated that now is the time to start designing this signal. BGE considered the establishment of low to zero carbon refurbished/new unit auctions via a redesigned enduring capacity market to be an appropriate solution in this regard.

EPUKI stated that ILCs should be designed in a manner which acknowledges the cost of maintaining and operating capacity in the SEM and remunerate capacity providers accordingly. In its view, failure to consider this will result in ineffective arrangements possibly resulting in the exit of Existing Capacity.

EPUKI was also opposed to allowing ILCs for New Capacity. EPUKI stated that there was no practical reason for New Capacity projects to seek shorter contracts unless it is unable to fulfil the current NCIRT of €300,000/MW<sub>d</sub>. In EPUKI's view, making ILCs accessible to New Capacity may result in a significant increase in the number of applications for smaller New Capacity units which would otherwise not meet this threshold. EPUKI also stated that recent years have demonstrated the difficulties in delivering New Capacity and that enabling ILCs for New Capacity would incentivise participants to deliver smaller, more deliverable projects which do not meet the current investment threshold for New Capacity and questioned whether this will achieve the correct balance for the system to ensure Security of Supply.

Energia considered that transparency is needed for market participants ahead of the 2028/29 T-4 auction, such as the recent publication of an information note on volumes decisions is needed.

ESB GT stated that the deployment of hydrogen fuelled generation can be achieved through the refurbishment of existing generation assets, but that the proposed access to ILCs is only part of the chain.

Hydrogen Ireland considered it necessary for enduring market mechanisms to incentivise refurbished and new-build zero-emission dispatchable power generation to be designed imminently. The deployment of hydrogen-fuelled generation through refurbishment of existing generation assets will be an important step in providing a pathway for hydrogen in power generation, in Hydrogen Ireland's view.

## **4. SEM Committee Responses**

### **4.1 Maximum Duration of Contract**

In SEM-23-093, the SEM Committee proposed introducing an ILC of three or five years, or some other length. The SEM Committee notes that most respondents to the consultation argued for the maximum duration of contract to be between seven to ten years and that one respondent argued for the maximum duration to be at least five years. The SEM Committee also notes the comment from one respondent that the maximum duration of contract should be three years, from 2028/2029, on the grounds

that the capacity seeking an ILC would still be high carbon emissions, which in turn would be incompatible with aspirations for the longer-term.

The SEM committee recognises that a longer length of contract would allow investors to spread their costs over a longer period, allowing bids to be more competitive. However, a key concern with a longer length of contract is that this could increase the level of lock-in to high-carbon-emitting generation for a longer period. The SEM Committee, therefore, considers that in determining the maximum duration of contract for the ILC, the right balance is required between;

- a) Avoiding locking-in high carbon capacity (up to 550gCO<sub>2</sub>/kWh) for longer periods;
- b) Avoiding giving an unnecessary competitive advantage to capacity with an ILC relative to other Existing Capacity by giving them multi-year contracts; and
- c) Allowing capacity with an ILC to be competitive with New Capacity which can spread its investment costs over ten years.

The SEM Committee considers that, at present, a maximum duration contract of five years would strike this balance.

## **4.2 Level of ICIRT**

The SEM Committee recognises that while there was no clear consensus among respondents for what the appropriate ICIRT in €/MW<sub>d</sub> should be, the threshold must be set at a low enough level to allow, in conjunction with contract duration, capacity with an ILC to be competitive. The SEM Committee also acknowledges the arguments that some respondents made, in that the ICIRT should not be set at a level too high, which could prevent genuinely beneficial investments in refurbishment taking place, and at a level too low, which could produce frequent repeat applications for ILCs.

The SEM Committee has determined that an ICIRT of €100,000/MW<sub>d</sub> would facilitate examples of refurbishment it has seen in the past through the UFI process and is the most appropriate figure considering the various arguments made in favour of a higher or lower threshold.

### **4.3 Gaming and Monitoring Spend**

The SEM Committee is of the view that gaming is a material concern and that steps should be applied to ensure that investments are made materially, in line with the plans submitted as part of the Exception Application process, with sanctions imposed where that investment has not been made.

The SEM Committee notes the comments from some respondents that Existing Capacity seeking an ILC should be treated as New Capacity. This then poses the question of whether existing units approved for an ILC will be subject to mandatory bidding, if they are treated as New Capacity. Currently, Existing Capacity has to bid into an auction unless it chooses to Opt-out prior to the start of Qualification. However, if the TSOs qualify a unit approved for an ILC as New Capacity, the unit has the option to withdraw from the auction, unless the SEM Committee makes additional changes to the CMC to prevent capacity with an ILC from being withheld from the auction. This raises the prospect that an existing unit which enters the Qualification process and is approved for an ILC can choose not to submit a bid. To prevent such instances, the SEM Committee considers it appropriate to maintain mandatory bidding for existing units approved for an ILC.

Having won an ILC, the SEM Committee also considers it necessary to mitigate against gaming concerns further by requiring Existing Capacity that is awarded an ILC to submit a Director's certificate affirming that it has spent the money materially in line with its submission, prior to the start of the first Capacity Year, and after it has undertaken the investment. The sanctions to apply are explained further in Section 5.

The SEM Committee considers that a tougher stance is justifiable where multi-year contracts are sought, which confer an advantage to the capacity with an ILC over Existing Capacity (with a one-year contract) in years two to five.

#### **4.4 Long-Stop Date, Termination Payments, and Performance Security**

The SEM Committee notes the range of different views on the length of the LSD, termination payments and the posting of performance security.

##### Long-Stop Date

The responses to the consultation offered a range of different views on the length of the LSD, varying from 18 months (same as New Capacity) to no LSD (same as Existing Capacity). Some respondents also suggested that the LSD should be related to the contract length.

The SEM Committee notes the comments from some respondents that equitable provisions should be made available for all projects with ILCs to be able to avail of the reliefs afforded to New Capacity in the case of project delays. The SEM Committee is of the view that at this stage, it is unclear whether a unit with an ILC will meet the same sort of delays that New Capacity is facing. The SEM Committee will keep this issue under consideration until it is better informed on the status of ILCs in progress. Any necessary CMC changes can be made in the future, if evidence comes to light that capacity with an ILC is experiencing the same sort of delays as New Capacity.

The SEM Committee considers that there is logic in setting the LSD 12 months after the start of the Capacity Year (i.e., for the 2028/29 T-4 auction, the LSD would be 1 October 2029). Where the required investment has not been made by the LSD and a director's certificate to verify this has not been submitted, the ILC contract will revert to a one-year contract.

##### Termination Payments and Performance Security

The SEM Committee notes the mixed responses from respondents on whether it would be appropriate for Existing Capacity that is seeking an ILC to be subject to termination payments and performance security. The SEM Committee considers that as non-delivery risks are lower for Existing Capacity than New Capacity and given that other sanctions for failing to prove investment spend will be introduced, termination payments and performance security should not be required for Existing Capacity awarded an ILC.



However, the SEM Committee does consider it appropriate for New Capacity awarded an ILC to be subject to termination payments and performance security.

The SEM Committee, however, will keep this issue under review, particularly if there is a failure by market participants to deliver the investment as envisaged.

## **4.5 Implementation Plans**

The SEM Committee considers it appropriate for Existing Capacity that is seeking an ILC to submit Implementation Plans and recognises the majority support for this proposal. The SEM Committee also agrees with comments from some respondents suggesting that not all milestones used for New Capacity would be appropriate to retain. Therefore, flexibility in this regard will be applied, where applicants can demonstrate that some of the standard milestones would not apply.

## **4.6 Other Issues**

### **Treatment of ILCs in Solving Constraints**

The SEM Committee notes the concerns of one respondent about how units that bid for multi-year contracts and are out-of-merit in the unconstrained auction, are treated in the constrained auction, for the purpose of solving constraints. At the moment, all Existing Capacity bidding for a one-year contract must be cleared in preference to multi-year New Capacity, regardless of price or Net Social Welfare. In practice, all multi-year New Capacity that has bid to date has chosen to bid for a 10-year contract. However, the SEM Committee would consider it difficult to justify treating a five-year New Capacity offer differently from a five-year ILC offer from capacity seeking to refurbish.

In the context of a T-4 auction, locking-in to a five-year contract for constraint reasons implies locking-in to out-of-merit generation for a period of up to nine years ahead. The principle behind giving one-year contracts priority over multi-year contracts to solve constraints reflects the intention, as outlined in the State aid decision, for locational constraints to be addressed and resolved. Giving preference to five-year contracts on par with one-year contracts would not reflect the intention for these constraints to be resolved as soon as possible.

The SEM Committee therefore considers it appropriate for a one-year contract to be cleared in preference to out-of-merit multi-year contracts (whether New Capacity or capacity with an ILC) to solve constraints.

### **USPCs and Exception Application Process**

The SEM Committee recognises the support from respondents regarding the proposed changes to the Exception Application process. The SEM Committee also notes the general comments made by respondents regarding the review of the USPC process and comments on the need for greater transparency for the USPC process. The SEM Committee has reviewed its own internal processes in order to make the USPC process more efficient.

The SEM Committee notes that the design of the ILC envisages an investor to lock-in to a fixed price contract for up to five years, and that the investor may have different Net Going Forward Costs in year one of the contract to year five of the contract. Given that the five-year fixed-price contract will be subject to a USPC, the SEM Committee recognises there may be a need for a reform to the USPC process for capacity with an ILC, to reflect market participants' changes in Net Going Forward Costs over the five-year period.

### **Decarbonisation**

The SEM Committee recognises the widespread support for the consideration of decarbonisation issues from respondents, as well as comments that CRM measures alone are unlikely to be a complete solution. The SEM Committee also notes that the Guidelines on State aid for climate, environmental protection and energy 2022 (CEEAG) have a greater focus on decarbonisation when compared with the previous State aid guidelines. This includes ensuring that new investments in gas-fired generation do not lock-in higher carbon emissions which are incompatible with 2030 and 2050 targets, and that aid is not granted to projects that provide a limited transitory benefit but lead to slower emissions reductions in the long-term by discounting cleaner technologies. One objective of introducing ILCs is to encourage Existing Capacity to carry out refurbishment work and bridge the capacity gap between the late 2020s and early

2030s, which could both promote plant efficiency and avoid the need to lock-in additional New Capacity, with a longer economic life than Existing Capacity.

The SEM Committee notes that under the current CRM regime, New Capacity must emit no more than 550g of CO<sub>2</sub>/kWh, but from 1 July 2025 Existing Capacity can only emit more than 550g of CO<sub>2</sub>/kWh provided that it abides by run hour limits, so that it emits no more than 350kg of CO<sub>2</sub> on average per annum per installed kWe. The SEM Committee has decided that post-investment, any capacity with an ILC must emit no more than 550gCO<sub>2</sub>/kWh. The capacity with an ILC will also be tested against relevant Best Available Techniques (BAT) standards. If a unit is subject to run-hour limits, investment made under an ILC contract should aim to remove the emission restriction on run hours or, at the least, not exacerbate the restriction.

The SEM Committee envisages that ILCs could allow existing units to invest in decarbonisation, as and when decarbonisation options are available to them. For example, Ireland's Climate Action Plan 2023<sup>6</sup> sought an additional 2GW of offshore wind which has been earmarked for green hydrogen production. Ireland's National Hydrogen Strategy<sup>7</sup>, released in 2023, envisaged the use of hydrogen for flexible power generation to enter the market between 2030 and 2035. In addition, the existence of ILCs may also give confidence to investors in New Capacity that they will be able to invest in decarbonisation and improve plant efficiency in the future, as more advanced technology becomes available.

The SEM Committee will keep the issue of using ILCs to further incentivise decarbonisation under consideration. For example, the SEM Committee may implement a form of ILC for Existing and New low carbon Capacity, without the unit having to make any significant investment. The Committee notes that GB is considering three-year contracts for units which emit less than 100gCO<sub>2</sub>/kWh, without them having to make any investment.

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<sup>6</sup> <https://www.gov.ie/en/publication/7bd8c-climate-action-plan-2023/>

<sup>7</sup> <https://www.gov.ie/en/publication/624ab-national-hydrogen-strategy/>

The SEM Committee more generally acknowledges the need to decarbonise other aspects of the CRM going forward, in order to meet climate targets in both Ireland and Northern Ireland.

### **Other Comments**

The SEM Committee notes the three-fold problem of maintaining security of supply during the transition to decarbonising the SEM, which one respondent identified and welcomes the proposed solutions to these problems, identified by the respondent. The SEM Committee will further consider the issue of decarbonisation and give due consideration to implementing changes ahead of future Capacity Auctions.

In relation to refurbishment requiring planned outages, the SEM Committee recognises that planned outages must be managed, where an Existing unit is seeking an ILC.

The SEM Committee also notes the more general comments made by respondents in response to SEM-23-093 regarding contract length, the enduring design of the Capacity Market, support mechanisms needed for the transition from natural gas to low carbon hydrogen and the request for greater transparency ahead of the 2028/29 T-4 auction.

## **5. SEM Committee Decisions**

The SEM Committee has decided to introduce an ILC of five years for Existing and New Capacity investing more than the ICIRT of €100,000/MW<sub>d</sub> for the 2028/29 T-4 auction and all subsequent auctions.

The SEM Committee's decision is:

- Existing and New Capacity will be eligible to apply to the RAs to obtain an Exception Application to bid for a contract of up to five years, where they demonstrate:
  - To the SEM Committee's satisfaction: that the unit will be investing more than €100,000/MW<sub>d</sub> (the Intermediate Contract Investment Rate Threshold

(ICIRT)) and that this investment will be efficiently incurred and delivers relevant benefits to consumers<sup>8</sup>.

- To the TSOs' satisfaction: that post-investment, it will emit no more than 550gCO<sub>2</sub>/kWh. If a unit is subject to run-hour limits, investment made under an ILC contract should aim to remove the emission restriction on run hours or, at the least, not exacerbate the restriction.
- The capacity with an ILC will also be tested against relevant Best Available Techniques (BAT) standards.
- As part of the Qualification process, a Capacity Market Unit (CMU) seeking an ILC will need to submit an Implementation Plan (like New Capacity) but the SEM Committee will consider exemptions if requested by the participant due to certain milestones not applying to the project.
- If a CMU qualifies for an ILC, following the Exception Application process, it can bid for a fixed price contract for up to five years (it may choose to bid for a shorter contract<sup>9</sup>).
- CMUs eligible for an ILC will be subject to the ECPC/a USPC. Following the Exception Application process, the CMU will be able to bid for a USPC which covers its Net Going Forward Costs, including refurbishment costs<sup>10</sup> over the five-year period<sup>11</sup>.
- A multi-year ILC offer will be treated the same as multi-year New Capacity offer for the purposes of solving constraints, i.e., all out-of-merit single year offers will be accepted before out-of-merit multi-year ILC offers in the constrained auction run.
- Bidding will be mandatory for an existing CMU approved for an ILC offer in the same way as it is for all Existing Capacity currently. If an existing CMU wishes to Opt-out, it has the option to do so, by the Opt-out Notification date. If it does not submit an Opt-out notification by the Opt-out Notification Date, it must bid. At the

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<sup>8</sup> Relevant benefits to consumers may include inter alia: life extension of the asset; increasing reliability of the asset; increasing efficiency; reducing emissions; and any other benefits which the SEM Committee may deem relevant from time to time. The SEM Committee may also require the applicant to demonstrate that the €100,000/MW<sub>d</sub> has been reasonably efficiently incurred, and "gold-plating" of investment to achieve the ICIRT will not be allowed.

<sup>9</sup> As with New Capacity, it will be allowed to bid for a contract for an integer number of years only.

<sup>10</sup> Including a WACC return.

<sup>11</sup> Or a shorter period if they are seeking a shorter contract.

time it applies for a USPC for an ILC, it may also apply for a one-year USPC (which will exclude the recovery of the investment cost). If, following the USPC process, it chooses to refurbish and bid for an ILC, it may bid up to the multi-year USPC. If it chooses not to refurbish, it must bid at or below its one-year USPC, or be bound by the ECPC, if it has not submitted a one-year USPC application.

- Existing Capacity winning an ILC will not be subject to termination payments or performance security, but New Capacity winning an ILC will be subject to termination payments or performance security.
- Having won an ILC, an Existing or New Capacity unit will be required to submit a Director's certificate affirming that it has spent the money materially in line with its submission prior to the start of the first Capacity Year, and after it has undertaken the investment. If it has not spent the money (and submitted the Director's certificate to do say so), the following sanctions will be applied:
  - The unit will be paid at the auction clearing price, not at a pay-as-bid price, until it has submitted the certificate. This is to avoid the unit benefiting from being paid based on a high USPC awarded on the basis of investments which have not been made.
  - The second and subsequent years of the ILC will be terminated if a Director's certificate has not been submitted by the first day of the second contract year (i.e., reverts to single year contract, like contracts available to other Existing Capacity).
- If the CMU fails to submit the Director's certificate prior to the first day of the first Capacity Year, but subsequently submits it before the contract is terminated, it can then get paid at a pay-as-bid price going forward. Payments may also be subject to clawback, if evidence comes to light that it has not spent the money and hence that the Director's certificate was inaccurate.

The measures above will be implemented for the 2028/29 T-4 auction in November 2024 and all future auctions until further notice. The SEM Committee may further develop and make changes to this policy ahead of subsequent auctions.

## 6. Next Steps

Investors seeking to bid for an ILC in the 2028/29 T-4 must submit an ILC Exception Application by 4 June 2024, the same date as the Qualification Application Date and the Exception Application Date (which applies to Existing Capacity seeking a USPC and New Capacity seeking authorisation to bid for a multi-year New Capacity contract of up to ten years).

The SEM Committee is publishing an ILC Exception Application template and guidance note in parallel to the publication of this decision in early May, and investors seeking to bid for a multi-year ILC will be required to use this template to demonstrate that they will be investing more than the ICIRT. Investors may also use this template to submit a USPC application to bid this multi-year fixed price contract at more than the Existing Capacity Price Cap.

The SEM Committee intends to bring forward a CMC modification proposal to implement the above ILC decisions for discussion as soon as possible and consult on the proposed CMC changes.

The SEM Committee recognises that the changes to the CMC will not be in place by the time Qualification and Exception Applications are due on 4 June. However, investors seeking ILCs in the 2028/29 T-4 should submit ILC Exception Applications by 4 June, in the knowledge that the CMC changes will be implemented in time to support Qualification and Exception decisions later in the year.